

WHAT IS CLAIMED IS:

1. A drive circuit comprising:
  - a drive output terminal for connecting emitting devices that emit at least light or electrons to the drive circuit via a connection member; and
  - a compensation circuit for compensating an output voltage supplied from the drive output terminal, wherein the compensation circuit comprises:
    - a drive transistor connected at a pair of its main electrodes respectively to the drive output terminal side and a reference voltage source side;
    - an operational amplifier for controlling an output voltage that is output from the drive transistor;
    - a detection transistor for detecting a current that flows through the drive transistor, the drive transistor and the detection transistor forming a mirror circuit;
    - a first feedback loop for detecting the output voltage at the drive output terminal and feeding back the output voltage to the operational amplifier; and
    - a second feedback loop for detecting an output current of the detection transistor and feeding back the output current to the operational amplifier.
2. The drive circuit according to claim 1, wherein the drive transistor and the detection transistor form a mirror circuit having a current mirror ratio of N:1 (where N > 1).

3. A drive circuit according to claim 1,  
wherein current adjustment resistors integrated  
into a single chip together with the drive circuit are  
connected respectively to the drive transistor and the  
detection transistor.

4. A drive circuit according to claim 1,  
wherein the detected current that flows through the  
detection transistor is converted to a voltage by using  
an adjustment element having a preset resistance value  
according to a resistance value of the connection member,  
and

the output voltage is compensated on the basis of  
the voltage obtained by the conversion, under control of  
the operational amplifier.

5. A drive circuit comprising:  
a drive output terminal for connecting emitting  
devices that emit at least light or electrons to the  
drive circuit via a connection member; and  
a compensation circuit for compensating an output  
voltage supplied from the drive output terminal,  
wherein the compensation circuit comprises:  
a drive transistor connected at a pair of its main  
electrodes respectively to the drive output terminal side  
and a reference voltage source side;  
an operational amplifier for controlling an output  
voltage that is output from the drive transistor;  
a detection transistor for detecting a current that

flows through the drive transistor;

a first feedback loop for detecting the output voltage at the drive output terminal and feeding back the output voltage to the operational amplifier;

a second feedback loop for detecting a current that flows through the detection transistor and feeding back the detected current to the operational amplifier; and

control means for controlling a potential at a control electrode of the detection transistor according to the current that flows through the detection transistor.

6. A drive circuit according to claim 5,  
wherein the detected current that flows through the detection transistor is converted to a voltage by using an adjustment element having a preset resistance value according to a resistance value of the connection member, and

the output voltage is compensated on the basis of the voltage obtained by the conversion, under control of the operational amplifier.